

Amendments to the Claims

Please cancel claims 13, 21 and 24 without prejudice. Please add new claims 28-34 as shown below in the List of Claims.

List of Claims

1-10. Cancelled.

11. (Currently amended) A process for producing an L-amino acid comprising:

- a) culturing an enterobacterium of the genus *Escherichia* in a medium for a time and under conditions suitable for producing said L-amino acid; and
- b) recovering or isolating said L-amino acid;

wherein the *yjgF* open reading frame of said enterobacterium has the nucleotide sequence of the coding sequence of SEQ ID NO:1 and has undergone a modification ~~has been inactivated~~ by one or more methods of mutagenesis selected from the group consisting of: deletion of all or part of the *yjgF* open reading frame; insertional mutagenesis due to homologous recombination in the *yjgF* open reading frame; and transitional or transversional mutagenesis with incorporation of a non-sense mutation in the *yjgF* open reading frame, wherein said modification results in an increased production of L-threonine by said enterobacterium; and

wherein said *yjgF* open reading frame encodes the polypeptide of SEQ ID NO:2.

12-13. Cancelled.

14. (Previously presented) The process of claim 11, wherein said L-amino-acid is selected from the group consisting of: L-asparagine; L-serine; L-glutamate; L-glycine; L-alanine; L-cysteine; L-valine; L-methionine; L-isoleucine; L-leucine; L-tyrosine; L-phenylalanine; L-histidine; L-lysine; L-tryptophan; and L-arginine.

15. (Previously presented) The process of claim 11, wherein said L-amino acid is L-threonine.

16. (Currently amended) The process of claim 11, wherein constituents of the fermentation broth and/or the biomass in its entirety or portions thereof remain ~~in~~ with the isolated L-amino acid ~~composition~~ of step b).
17. (Currently amended) The process of claim 11, wherein said enterobacterium of the genus *Escherichia* further comprises one or more gene products that are overexpressed, overexpression being achieved by increasing the copy number of the gene or genes or placing the gene or genes under the control of a strong promoter, compared to said enterobacterium prior to said overexpression and wherein said one or more gene products are encoded by a gene or genes selected from the group consisting of:
- a) a *thrA* gene coding for an enzyme having the activity of both aspartate kinase and homoserine dehydrogenaseI;
 - b) a *thrB* gene coding for homoserine kinase;
 - c) a *thrC* gene coding for threonine synthase;
 - d) the *Corynebacterium glutamicum pyc* gene coding for pyruvate carboxylase;
 - e) a *pps* gene coding for phosphoenol pyruvate synthase;
 - f) a *ppc* gene coding for phosphoenol pyruvate carboxylase;
 - g) both the a *pntA* and a the *pntB* gene coding for the subunits of pyridine transhydrogenase;
 - h) the *Escherichia coli rhtB* gene coding for a protein imparting homoserine resistance;
 - i) a *mgo* gene coding for malate:quinone oxidoreductase;
 - j) the *Escherichia coli rhtC* gene coding for a protein imparting threonine resistance;
 - k) the *Corynebacterium glutamicum thrE* gene coding for a threonine export carrier protein;
 - l) a *gdhA* gene encoding glutamate dehydrogenase;
 - m) a *hns* gene encoding the DNA-binding protein HLP-II;
 - n) a *pgm* gene encoding phosphoglucomutase;
 - o) a *fba* gene encoding fructose bisphosphate aldolase;

- p) a ptsH gene encoding the phosphohistidine protein hexose phosphotransferase;
- q) a ptsI gene encoding enzyme I of the phosphotransferase system;
- r) a crr gene encoding the glucose-specific IIA component;
- s) a ptsG gene encoding the glucose-specific IIBC component;
- t) a lrp gene encoding the regulator of the leucine regulon;
- u) a csrA gene encoding the global regulator Csr;
- v) a fadR gene encoding the regulator of the fad regulon;
- w) a iclR gene encoding the regulator of central intermediate metabolism;
- x) a mopB gene encoding the 10 Kd chaperone;
- y) an ahpC gene encoding the small subunit of alkyl hydroperoxide reductase;
- z) an ahpF gene encoding the large subunit of alkyl hydroperoxide reductase;
- aa) a cysK gene encoding cysteine synthase A;
- bb) a cysB gene encoding the regulator of the cys regulon;
- cc) a cysJ gene encoding the flavoprotein of NADPH sulfite reductase;
- dd) a cysI gene encoding the haemoprotein of NADPH sulfite reductase;
- ee) a cysH gene encoding adenylyl sulfate reductase;
- ff) a phoB gene encoding the positive regulator PhoB of the pho regulon;
- gg) a phoR gene encoding the sensor protein of the pho regulon;
- hh) a phoE gene encoding protein E of the outer cell membrane;
- ii) a pykF gene which codes for fructose-stimulated pyruvate kinase I;
- jj) a pfkB gene encoding 6-phosphofructokinase II;
- kk) a malE gene encoding the periplasmic binding protein of maltose transport;
- ll) a sodA gene encoding superoxide dismutase;
- mm) a rseA gene encoding a protein with anti-sigmaE activity;
- nn) a rseC gene encoding a global regulator of the sigmaE factor;
- oo) a sucA gene encoding the decarboxylase subunit of 2-ketoglutarate dehydrogenase;

- pp) a *sucB* gene coding for the dihydrolipoyltranssuccinase E2 subunit of 2 ketoglutarate dehydrogenase;
 - qq) a *sucC* gene encoding the beta-subunit of succinyl-CoA synthetase;
 - rr) a *sucD* gene encoding the alpha-subunit of succinyl-CoA synthetase;
 - ss) a *adk* gene encoding adenylate kinase;
 - tt) a *hdeA* gene coding for a periplasmic protein with a chaperonin-like function;
 - uu) a *hdeB* gene which codes for a periplasmic protein with a chaperonin-like function;
 - vv) a *icd* gene coding for isocitrate dehydrogenase;
 - ww) a *mgIB* gene coding for the periplasmic galactose-binding transport protein;
 - xx) a *lpd* gene coding for dihydrolipoamide dehydrogenase;
 - yy) an *aceE* gene coding for the E1 component of the pyruvate dehydrogenase complex;
 - zz) an *aceF* gene coding for the E2 component of the pyruvate dehydrogenase complex;
 - aaa) a *pepB* gene coding for aminopeptidase B;
 - bbb) a *aldH* gene coding for aldehyde dehydrogenase;
 - ccc) a *bfr* gene coding for the iron storage homoprotein;
 - ddd) a *udp* gene which codes for uridine phosphorylase; and
 - eee) a *rseB* gene which codes for the regulator of sigmaE factor activity.
18. (Previously presented) The process of claim 11, wherein said enterobacterium of the genus *Escherichia* further comprises at least one gene which is inactivated by one or more methods of mutagenesis selected from the group consisting of deletion of all or part of the gene, insertional mutagenesis due to homologous recombination, and transition or transversion mutagenesis with incorporation of a non-sense mutation in the gene, compared to said enterobacterium, prior to mutagenesis wherein the at least one gene is selected from the group consisting of:
- a) a *tdh* gene coding for threonine dehydrogenase;
 - b) a *mdh* gene coding for malate dehydrogenase;

- c) the open reading frame (orf) *yjfA* of *E. coli*, when said modified *Escherichia* is *Escherichia coli*;
 - d) the open reading frame (orf) *ytfP* of *E. coli*, when said modified *Escherichia* is *Escherichia coli*;
 - e) a *pckA* gene coding for phosphoenol pyruvate carboxykinase;
 - f) a *poxB* gene coding for pyruvate oxidase;
 - g) an *aceA* gene coding for isocitrate lyase;
 - h) a *dgsA* gene coding for the regulator DgsA of the phosphotransferase system;
 - i) the *Escherichia coli fruR* gene coding for a fructose repressor;
 - j) a *rpoS* gene which codes for the sigma³⁸ factor;
 - k) an *aspA* gene encoding aspartate ammonium lyase; and
 - l) an *aceB* gene encoding malate synthase A.
19. (Previously presented) The process of claim 11, wherein said enterobacterium is of the species *Escherichia coli*.
20. (Previously presented) The process of claim 11, wherein the expression of the *yjgF* open reading frame has been eliminated by the deletion of part of the *yjgF* open reading frame.
21. Cancelled.
22. (Previously presented) The process of claim 11, wherein said L-amino acid is recovered from said enterobacterium.
23. (Previously presented) The process of claim 11, wherein said L-amino acid is recovered from said medium.
24. Cancelled.
25. (Previously presented) The process of claim 11, wherein culturing is performed using a batch process.

26. (Previously presented) The process of claim 11, wherein culturing is performed using a fed batch process.
27. (Previously presented) The process of claim 11, wherein culturing is performed using a repeated fed batch process.
28. (New) A process for the producing an L-amino acid, comprising:
 - a) culturing an enterobacterium of the genus *Escherichia* in a medium for a time and under conditions suitable for producing said L-amino acid; and
 - b) recovering or isolating said L-amino acid;wherein the expression of the *yjgF* open reading frame of said enterobacterium has been eliminated by deletion of all of the *yjgF* open reading frame; and wherein said *yjgF* open reading frame encodes the polypeptide of SEQ ID NO:2.
29. (New) The process of claim 28, wherein said *yjgF* open reading frame has the nucleotide sequence of SEQ ID NO:1.
30. (New) The process of claim 28, wherein said L-amino acid is selected from the group consisting of: L-asparagine; L-serine; L-glutamate; L-glycine; L-alanine; L-cysteine; L-valine; L-methionine; L-isoleucine; L-leucine; L-tyrosine; L-phenylalanine; L-histidine; L-lysine; L-tryptophan; and L-arginine.
31. (New) The process of claim 28, wherein said L-amino acid is L-threonine.
32. (New) The process of claim 28, wherein:
 - a) said *yjgF* open reading frame has the sequence of SEQ ID NO:1;
 - b) said L-amino acid is L-threonine; and
 - c) said enterobacterium is of the species *E. coli*.
33. (New) The process of claim 11, wherein said L-amino acid is L-homoserine.
34. (New) The process of claim 28, wherein said L-amino acid is L-homoserine.